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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
EDWARDS JR, TIMOTHY	
ART UNIT	**PAPER NUMBER**
2612	

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/724,145	PERRY ET AL.	
	Examiner	Art Unit	
	Timothy Edwards, Jr.	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) *1-21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6,9,11-14,16,17,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al '646.

Considering claim 1, Howell discloses an energy information system with a sub-measurement board comprising, a) a monitoring unit at a power consumer site with connections to probes on individual power distribution circuits emanating from a power distribution and control panel of the consumer site (see col 5, lines 4-12 and fig 4); b) except Howell does not specifically recite providing an identification of at least one electrical load on each power distribution circuit in a circuit description table. However, in col 1, lines 21-32 Howell disclose monitoring and providing a load profile on individual circuit (i.e. heating, air-conditioning and lighting circuits) within a distribution panel. Howell discloses in col 6, lines 6-18 allowing the customer and energy service provider to monitor energy consumption by certain individual circuits and the customer may choose to monitor any individual circuit on his premise. One of ordinary skill in the art would readily recognize individual circuits of the Howell system would be identified and selectable to know which circuit is being monitored and displayed. Therefore, it would

have been obvious to one of ordinary skill in the art the Howell system would have a means to identify and select each monitored circuit because Howell discloses the desire to monitor and display individual circuits of a distribution panel; c) measuring a power consumption of each of the power distribution circuits using the corresponding probes (see col 7, lines 1-4 and fig 4, item 121); d) communicating power consumption data related to the respective power distribution circuits to a power monitoring server that collects the power consumption data (see col 4, lines 14-20 and col 5, lines 9-12); e) analyzing the power consumption data to provide useful information to interested parties (see col 3, lines 7-11).

Considering claim 2, Howell discloses the limitation of this claim (see col 3, lines 19-23).

Considering claim 3, Howell disclose the limitation of this claim (see col 3, lines 7-11 and lines 19-23); except Howell does not specifically recite interested parties gain access to the power consumption information in accordance with a subscription agreement between the power monitoring service and the interested party. One of ordinary skill in the art readily recognizes to gain access to specific information there must be an agreement between the interested party and the caretaker of the information. Therefore, it would have been obvious to one of ordinary skill in the art there would be an agreement between the interested party and the caretaker of the information because Howell discloses the sending of load profile data to the service provider and a server or website for processing and posting.

Considering claim 4, Howell discloses the limitation of this claim (see col 3, lines 12-17, col 6, lines 48-51 and col 8, lines 47-49).

Considering claim 5, Howell discloses the limitation of this claim (see col 5, lines 9-12).

Considering claim 6, Howell discloses using the power consumption information to compute and display an aggregated power consumption load profile of at least one appliance (see col 5, lines 61-63); except Howell does not specifically recite the use of a circuit description table associated with the power consumption site, to compute an aggregated power consumption profile of at least one appliance. Examiner addressed the use of a circuit description table associated with an electrical load (see claim 1, part (b)). With regard to using the power consumption information and the circuit description table to compute an aggregated power consumption profile of at least one application is within the scope of the Howell system because Howell disclose the desire to monitor and display the load profiles of individual circuits of a distribution panel. In order to accomplish this task the Howell system must be able to identify the circuit being monitored, gather the consumption data associated with this particular circuit and perform the appropriate calculation on this consumption data to present it in graphs or charts (i.e. an aggregated load profile).

Considering claim 9, Howell discloses the limitation of this claim (see col 3, lines 19-23, col 4, lines 14-20 and col 5, lines 9-12).

Considering claim 11, the limitations of this claim are interpreted and rejected as stated in claim 1; except a monitoring unit comprising, 1) at least one processor (see col 6, lines 44-45 and fig 4, item 88); 2) a memory for storing the power consumption information (see col 8, lines 16-18 and fig 4, item 82); 3) a communication link for transmitting the power consumption information to a communications network (see col 6, lines 33-35 and fig 3, item 69).

Considering claim 12, Howell discloses the limitation of this claim (see col 7, lines 1-4).

Considering claim 13, Howell does not specifically recite at least one processor comprises a digital signal processor (DSP) for sampling the measured power consumption parameter values output by the current probes. Howell discloses in col 7, lines 26-33 the use of a switching matrix circuit for receiving the consumption parameters the switching matrix comprising a 4-channel simultaneous sampling, 12-bit data acquisition system and A/D converter connected to a microprocessor. One of ordinary skill in the art would readily recognize the need for a digital signal analyzer in the utility monitoring environment because utility data is usually measured analog data and the processing of this analog data into digital data is critical for the processing of this data by a microprocessor or a central processor unit (CPU), so that the data can be

further used and analyze by other digital devices. Therefore, it would have been obvious to one of ordinary skill in the art to use a DSP device in the system of Howell to sample the measured parameter and convert these parameters into digital data because Howell discloses the desire to sample the parameters of individual circuits and pass this data on to a microprocessor for further processing.

Considering claim 14, the limitation of this claim is interpreted and rejected as stated in claim 13. With respect to the limitation the number of DSPs required is less than the number of power distribution circuits see figs 4 and 5C, item 78.

Considering claim 16, the limitations of this claim are interpreted and rejected as stated in claim 11.

Considering claim 17, Howell discloses the limitation of this claim (see col 3, lines 13-33).

Considering claim 19, Howell discloses the limitation of this claim (see col 3, lines 7-12).

3. Claims 7,8,10,15,18,20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al as applied to claim 6 above, and further in view of Bartone et al '868 (submitted IDS).

Considering claim 7, Howell does not specifically recite comparing the power consumption information of the appliance and a power distribution circuit with the aggregate power consumption profile in order to identify actual power consumption differences between the appliance and a mean of power consumption of similar monitored appliance. Even thought, Howell does not specifically recite his central monitoring location compares power consumption information of similar monitored appliances, one of ordinary skill in the art would readily recognize the analyzing of load profiles from several end users could include comparing the load profiles of similar monitored appliances. Howell discloses the sending of individual circuit load profiles to a central monitoring location for analyzes. Bartone teaches (see paragraph 0011) analyzing the load profiles of other end users having complimentary and offsetting load profile characteristics. Therefore, it would have been obvious to one of ordinary skill in the art the comparing of power consumption information of similar monitored appliances as taught by Bartone is within the scope of Howell invention because Howell discloses sending load profile data of individual end user to be analyzed at a central monitoring location. Barton teaches the central monitoring location for analyzing the load profiles of other end users having complimentary and offsetting load profile characteristics is known in the art.

Considering claim 8, Howell does not specifically recite using information related to power consumption of one appliance over an interval of time, and the aggregate power consumption profile associated with the appliance to identify a fault in the appliance.

Bartone teaches (see paragraphs 0039, 0048 and 0053) using the aggregate power consumption profile associated with the appliance to identify a fault in the appliance. Obviousness is as stated in claim 7.

Considering claims 10,20 the limitation of these claims are interpreted and rejected as stated in claim 8.

Considering claim 15, Howell does not specifically recite the monitoring unit comprises an interface for transmitting a command to a controller of at least one power consuming device, the interface and controller permitting the control of the device. Bartone teaches (see paragraphs 0037-0038) the use of a sub-measuring device for collecting data and managing individual users home from a centralized location via the sub-measuring device. Even thought, Howell discloses in col 12, lines 42-44 'the scope of his invention is not limited to the exact details shown and described". One of ordinary skill in the art readily recognizes the controlling of a power-consuming device by a monitoring unit is well known in the art. Bartone teaches the method of controlling a device by a monitoring unit is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the monitoring unit to control a power consuming device as taught by Bartone because Howell discloses the scope of his is not limited by his description and this limitation is well known in the art.

Considering claim 18, Howell does not specifically recite a monitoring service server comprises a database for storing an aggregate power consumption profile computed using power consumption profiles and circuit description tables of other power consumers. Howell teaches in col 3, lines 7-11 and lines 42-47 and col 12, lines 25-29 the sending of load profile data to a utility provider for analyzes and processing. Bartone teaches (see paragraphs 0041 and 0043) monitoring service server comprises a database for storing an aggregate power consumption profile computed using power consumption profiles and circuit description tables of other power consumers. Therefore, it would have been obvious to one of ordinary skill in the art to modify the monitoring service server to addressed this limitation as taught by Bartone because both systems are concern with the use of load profile consumption data by the service provider.

Considering claim 21 the limitation of this claim is interpreted and rejected as stated in claim 15.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ehlers et al US 5,696,695 and Wareham et al US 2004/0075343 both references disclose a monitoring unit for controlling a power consumption device.

5. Any inquiry concerning this communication should be directed to Examiner Timothy Edwards, Jr. at telephone number (571) 272-3067. The examiner can normally be reached on Monday-Thursday, 8:00 a.m.-6:00 p.m. The examiner cannot be reached on Fridays.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached at (571) 272-7308.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-4700, Mon-Fri., 8:30 a.m.-5:00 p.m.

Any response to this action should be fax to:

(571) 273-8300 (for formal communications intended for entry).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http:/pair-direct.uspto.gov or contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy Edwards, Jr
Primary Examiner
March 27, 2006